**In the Claims:**

1. (currently amended) An apparatus for selectively moving hydrogen ions in aqueous solution comprising an electrical field generator which switches faster than 1 ms, and a low impedance electrical connection device which introduces said electrical field into a target **at a frequency greater than 1 MHz**.

2. (canceled)

3. (previously presented) The apparatus according to Claim 1, wherein said aqueous solution is in an organism.

4. (previously presented) The apparatus according to Claim 1, wherein a pH value is determined by a current supplied from said electrical field generator.

5. (previously presented) The apparatus according to Claim 1, wherein said moving hydrogen ions is used to generate heat.

6. (previously presented) The apparatus according to Claim 1, wherein said electrical field generator comprises generating step field.

7. (previously presented) The apparatus according to Claim 1, wherein said electrical field generator comprises generating alternating field.

8. (previously presented) The apparatus according to Claim 1, wherein said low impedance electrical connection device comprises a plurality of electrodes.

9. (previously presented) The apparatus according to Claim 8, wherein said low impedance electrical connection device comprises at least one smaller-area electrode with a smaller area.

10. (previously presented) The apparatus according to Claim 9, wherein said at least one smaller-area electrode is arranged into said target.

11. (previously presented) The apparatus according to Claim 7, wherein said alternating field comprises a biphasic square wave.

12. (canceled)

13. (previously presented) The apparatus according to Claim 8, wherein said low impedance electrical connection device comprises a plurality of electrode pairs.

14. (previously presented) The apparatus according to Claim 13, wherein the plurality of said electrode pairs generate electrical fields across said target.

15. (previously presented) The apparatus according to Claim 1, wherein said target comprises a tumor.

16. (previously presented) The apparatus according to Claim 1, wherein said target comprises a region of poor blood circulation.

17. (currently amended) The apparatus according to Claim ~~**2, wherein said**~~ **further comprising a** monitor ~~**comprises**~~ **for tracing a current signal including** a device for measuring the variation in said current **signal**.

18. (currently amended) The apparatus according to Claim ~~2, wherein said~~ **further comprising a** monitor ~~comprises~~ **including** an ultrasound-generating device.

19. (previously presented) The apparatus according to Claim 14, wherein the plurality of said electrode pairs work at different times.

20. (previously presented) The apparatus according to Claim 14, wherein the plurality of said electrode pairs generate electric fields that add in terms of vector at the target.

21. (previously presented) The apparatus according to Claim 4, further comprising a calculating system for estimating the possibility of a cancer based on a concentration of the hydrogen ions.

22. (previously presented) The apparatus according to Claim 21, wherein said estimation comprises the determination of positioning said cancer.

23. (previously presented) The apparatus according to Claim 1, wherein said electric field generator comprises a magnetic field generator.

24. (previously presented) The apparatus according to Claim 1, wherein said low impedance connection device comprises low pH ingredient.

25. (previously presented) The apparatus according to Claim 24, wherein said low pH ingredient comprises an organic acid.

26. (previously presented) The apparatus according to Claim 25, wherein said organic acid comprises a lactic acid.

27. (previously presented) The apparatus according to Claim 25, wherein said organic acid comprises an acetic acid.

28. (previously presented) The apparatus according to Claim 1, wherein said the moving of hydrogen ions is used to reduce the viscosity of said solution.

29. (previously presented) The apparatus according to Claim 28, wherein said solution is in a small tube.

30. (currently amended) The apparatus according to Claim 29, wherein said small tube is in an ~~**artificial**~~ machine.

31. (currently amended) The apparatus according to Claim **[[30]]** **29**, wherein said small tube is in a microcirculation.

32. (previously presented) The apparatus according to Claim 8, wherein the plurality of said electrodes comprise a temperature sensor.

33. (currently amended) **[[A]]** **An externally applied** medium as interface to lower the impedance between a ~~**body**~~ **target** and an electrode comprising a low pH solution.

34. (currently amended) The medium as claimed in Claim 33, wherein said ~~**body**~~ **target** comprises a biological fluid.

35. (previously presented) The medium as claimed in Claim 33, wherein said low pH solution comprises an organic acid.

36. (previously presented) The medium as claimed in Claim 35, wherein said organic acid comprises a lactic acid.

37. (previously presented) The medium as claimed in Claim 35, wherein said organic acid comprises an acetic acid.

38. (new) A method for selectively moving hydrogen ions in aqueous solution comprising:

generating an electrical field using an electrical field generator that switches faster than 1 ms; and

introducing said electrical field into a target using a low impedance electrical connection device at a frequency greater than 1 MHz.

39. (new) A method as set forth in claim 38 wherein the aqueous solution and target are contained in an organism.